APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,231	10/31/2001	Michael S. Rothberg	K35A0840	7852

				EXAMINER
26332	7590	08/06/2004		ELAMIN, ABDELMONIEM I

WESTERN DIGITAL CORP.
20511 LAKE FOREST DRIVE
C205 - INTELLECTUAL PROPERTY DEPARTMENT
LAKE FOREST, CA 92630

ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-28* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-28* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims *1-28*, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenny et al,

US. Pat. No. 6,600,614 in view of Watts, US. Pat. No. 6,336,161.

3.   Claims *1, 13-15 and 27-28*, Lenny teaches a disk drive connectable to a host computer

executing a computer program for sending a Self Monitoring Analysis and Reporting

Technology   (SMART) command to the disk drive, the disk drive, [*title, abstract*] comprising:

(a) a disk [*108 of Fig. 2*];

(b) a head actuated radially over the disk [*118 of Fig. 2*];

(c) an error recovery system for detecting and correcting errors in user data read from the

disk [*col. 9, lines 49-60*];

(d) a cache system for caching user data received from the host computer and user data

read from the disk [*inherently, disk drives comprise a cache for caching user data received from*

the host computer and user data read from the disk] ;

(f) an interface for receiving the SMART command from the host computer, the SMART

command comprising; a command code comprising a predetermined value for identifying the

command code as a SMART command; a sub command comprising one of a plurality of

predetermine values identifying one of a plurality of SMART commands selected from the

group consisting of enabling SMART diagnostics, reading diagnostic data, and transmitting

setup data to the disk drive; and setup data for modifying the configuration parameters [*col. 2,*

lines 21-55, col. 6, lines 18-36].

Lenny fails to teach a plurality of configuration parameters stored in a non-volatile

manner for configuring at least one system when the disk drive is powered on, the at least one

system selected from the group consisting of the cache system and the error recovery system.

Watts teaches a computer system provides a user the ability to restore operation to a

previous state from a non-volatile semiconductor memory [*abstract, Figs 2a, 2b, 3a and 3b, col.*

4, lines 8-67].

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the system of Lenny to include a plurality of configuration parameters

stored in a non-volatile manner for configuring at least one system when the disk drive is

powered on, the at least one system selected from the group consisting of the cache system and

the error recovery system, because it provide the following advantages:

First, the hard drive is not used until it has been properly initialized.

Second, prior operation state of the computer system can be quickly restored upon power-

up.

Third, the user can return to the exact state prior to power down, without reloading

application programs and files.

Fourth, since returning to a prior state is simplified, the computer system may be powered

down more often, resulting in vastly improved power use.

Fifth, the amount of non-volatile semiconductor memory can be added as needed [*see Watts, col. 2, lines 38-49*].

4.   Claims *2 and 16*, Watts teaches (a) the disk drive further comprises a volatile semiconductor memory; (b) when the disk drive is powered on, the configuration parameters are copied to the volatile semiconductor memory; and c) the setup data for modifying the configuration parameters stored in the volatile semiconductor memory for configuring the at least one system on-the-fly [*abstract, Figs 2a, 2b, 3a and 3b, col. 4, lines 8-67*].

5.   Claims *3-5 and 17-19*, Lenny teaches the error recovery system comprises a plurality of retry procedures responsive to the configuration parameters [*col. 9, lines 49-60*].

6.   Claims *6-7 and 20-21*, Lenny teaches a write-verify system for verifying a write operation by verifying recoverability of written data, wherein the at least one system configured using the configuration parameters includes the write-verify system [*col. 5, lines 37-45*].

7.   Claims *8-9 and 22-23*, Watts teaches (a) the cache system comprises a semiconductor memory; (b) the cache system reserves a block of the semiconductor memory for caching data read from the disk during a read operation; and (c) the configuration parameters for configuring when the cache system releases the reserved block of semiconductor memory [*Fig. 1, col. 3, line 23 thru col. 4, line 7*].

8.   Claims *10-11 and 24-25*, Lenny teaches (a) the cache system comprises a semiconductor memory; (b) the disk comprises a plurality of tracks; (c) each track comprises a plurality of sectors; and (d) the configuration parameters for configuring a number of sectors read into the semiconductor memory during a read operation following a target sector of the read operation [*Fig. 2, col. 3, line 35 thru col. 4, line 60*].

9.   Claims *12 and 26*, Lenny teaches e computer program comprises a graphical user interface for generating the setup data in response to user input [*col. 5, line 61 thru col. 6, line 5*].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A Elamin whose telephone number is (703)305-3804. The examiner can normally be reached on MON-FRI 9:30 AM - 6:00 PM.
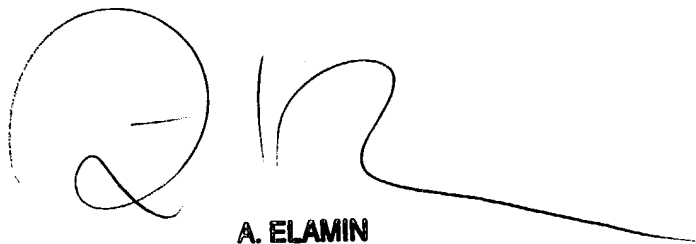
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A Elamin
Primary Examiner
Art Unit 2116

August 3, 2004

A. ELAMIN
PRIMARY EXAMINER